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WHAT IS CLAIMED IS:

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1. A power supply circuit for generating a supply voltage based on an input constant voltage and supplying the supply voltage to a load, said power supply circuit comprising:

10 a delay circuit delaying the input constant voltage;

 an output circuit generating the supply voltage from the input constant voltage delayed by said delay circuit and supplying the supply voltage
15 to said load; and

 a current generation circuit generating a current based on the supply voltage that is generated by said output circuit and supplying the generated current to said output circuit as a drive
20 current.

25 2. The power supply circuit as claimed in claim 1, wherein the current generated by the current generation circuit is set to a current value to drive the output circuit.

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3. The power supply circuit as claimed in claim 1, wherein the delay circuit comprises:

35 a resistance serially provided between an input terminal to which the input constant voltage is applied and the output circuit; and

a capacitance element provided between a connection point of said resistance and the output circuit and a base potential terminal serving as a base potential and delaying the input constant
5 voltage.

10 4. The power supply circuit as claimed in claim 1, wherein, when the supply voltage is supplied to a plurality of loads, the delay circuit is provided for the plurality of loads in common, and the output circuit and the current generation
15 circuit are provided for each of the loads.